Cal OES
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES

State of California
9-1-1 Advisory Board
PUBLIC NOTICE / AGENDA
APRIL 6, 2017
9:00 A.M - PST
915 I Street, Sacramento, CA 95814
(Sacramento City Council Chambers)

Date of Notice: March 24, 2017

NOTICE IS HEREBY GIVEN that the State 9-1-1 Advisory Board will meet in Sacramento, California, as set forth below. The Bagley-Keene Open Meeting Act applies to meetings of the State 9-1-1 Advisory Board, which are open to the public. Public participation, comments and questions are welcome for each agenda item. All items are appropriate for action if the Board wishes to take action. Agenda items may be taken out of order.

Item	Agenda Topic	Action
I	WELCOME - CALL TO ORDER – ROLL CALL	Roll Call
II	APPROVAL OF NOVEMBER 10, 2016 MEETING MINUTES	Discussion & Vote
III	CLOSED SESSION - REVIEW OF DETAILED INFORMATION ON 9-1-1 OUTAGES, PENDING LITIGATION AND PERSONNEL MATTERS *Pursuant to G.C. Section 11126(e)*	Discussion
IV	LEGISLATIVE UPDATE *Reggie Salvador*	Discussion
V	FIRSTNET UPDATE PRESENTATION *Patrick Mallon*	Presentation
VI	CALL DATA REPORTS *David Wilson*	Discussion
VII	CA 9-1-1 BRANCH REPORT *Budge Currier*	Discussion
VIII	LONG RANGE PLANNING COMMITTEE REPORT *Charles Cullen*	Discussion
IX	COUNTY COORDINATOR TASK FORCE *Tracey Kesler*	Discussion
X	AGENDA ITEMS FOR FUTURE MEETINGS	Discussion
XI	PUBLIC COMMENT	Discussion
XII	ADJOURN	Discussion

The Board's meetings are subject to cancellation and agenda items are subject to removal.

While the board intends to webcast this meeting, it may not be possible to webcast the entire open meeting due to limitation on resources.

STATE 9-1-1 ADVISORY BOARD

PUBLIC COMMENT: Public comments will be limited to three minutes per person or organization. If the Office determines that there is not enough time to hear from all those wishing to present comments, the Office will select among those wishing to testify to ensure representation of a range of viewpoints and interests. Those providing public comment may choose to supplement their testimony with written statements that will be made part of the official public meeting record.

SUGGESTIONS FOR SUBMISSION OF WRITTEN MATERIALS: It is requested that written materials be submitted to the State 9-1-1 Advisory Board liaison prior to the meeting. If this is not possible it is requested that at least 30 copies be submitted to the State 9-1-1 Advisory Board liaison. This material will be distributed to the State 9-1-1 Advisory Board Members.

ACCESS TO HEARING: The meeting is accessible to the physically disabled. A person who needs a disability-related accommodation or modification in order to participate in the meeting may make a request by contacting Paul Dumetz at (916) 657-9505 or sending a written request to the Public Safety Communications Office at 601 Sequoia Pacific Blvd, Sacramento, CA 95811. Providing your request at least five (5) business days before the meeting will help ensure availability of the requested accommodation.

CLOSED SESSION: Government Code Section 11126(e) The State 9-1-1 Advisory Board may meet to consider possible and pending litigation personnel maters and 9-1-1 outage information in a session closed to the public pursuant to attorney-client privilege and statutory exception to the Bagley Keene Open Meeting Act.

For further information, please contact:

General Information:
Paul Dumetz, Administrative Liaison to the State 9-1-1 Advisory Board, at (916) 657-9505 or via email at Paul.Dumetz@caloes.ca.gov.

Media Information:
Robb Mayberry, Public Information Officer, at 916-845-8509 or via email at Robb.Mayberry@caloes.ca.gov.

Governor's Office of Emergency Services
State 9-1-1 Advisory Board Members

	Statutory recommendation of PSC (Non-Voting) Chair, Patrick Mallon Governor's Office of Emergency Services 601 Sequoia Pacific Blvd Sacramento, CA 95811 Ph: 916-657-9482 Patrick.Mallon@caloes.ca.gov	Patrick J. Mallon, 70, of Azusa, has been appointed Assistant Director of Public Safety Communications in the Governor's Office of Emergency Services. Mallon was executive director and program manager at Los Angeles Regional Interoperable Communications Systems from 2011 to 2016 and a senior program manager at Carter Goble Lee Facility Management LLC from 2007 to 2011. He was coordinator of the Los Angeles regional crime laboratory project at the Los Angeles County Sheriff's Department from 2001 to 2007, where he served as a commander from 1967 to 2003. Mallon was a criminal investigator as an E4 in the U.S. Army Criminal Investigation Command from 1967 to 1969. He is a member the Project Management Institute. Mallon earned a Master of Public Administration degree from Pepperdine University. Mallon is a Democrat
	Statutory recommendation of CHP Scott Howland, Chief Appointed: May 2016 California Highway Patrol 601 North 7th Street Sacramento, CA 95811 Ph:916-843-4000 showland@chp.ca.gov	Scott Howland, 48, of Sacramento, has been appointed to the State 9-1-1 Advisory Board. Howland has served as chief information officer and chief of the Information Management Division at the California Highway Patrol since 2014, where he has held several positions since 1990, including assistant chief in the Coastal Division and in the Office of the Assistant Commissioner for Leadership Development and in the Special Representative's Office. He earned a Doctor of Education degree in organizational leadership and a Master of Business Administration degree in management and leadership from the University of La Verne. This position does not require Senate confirmation and there is no compensation. Howland is registered without party preference.
	Statutory recommendation of APCO Charles Melvin Berdan Appointed: May 2016 13864 Clay East Road Herald, CA 95638 Ph:209-748-4004 smokeaterconsulting@gmail.com	Charles Berdan, 57, of Herald, has been the dispatch manager at the Alameda County Regional Emergency Communications Center since 2002. He was emergency communications manager at Pacific Bell SBC from 2000 to 2002. Berdan served in various positions at the Sacramento Regional Fire and EMS Communications center from 1979 to 2000, including deputy director. He was a firefighter and dispatcher at the Citrus Heights Fire Department from 1973 to 1979. Berdan is a Democrat.

State 9-1-1 Advisory Board Members

Statutory recommendation of CPCA
John Peters, Chief
Appointed: March 2017

Chief of Police
Grover Beach Police Department
711 Rockaway Ave
Grover Beach, CA 93433
jpeters@gbpd.org

Chief at Grover Beach Police Department since 2015, where he has held several positions since 2006, including commander, sergeant and police officer. He was police officer and field training officer at the King City Police Department from 2003 to 2006 and a police officer and dispatcher at the Fort Hunter Liggett Police Department from 2001 to 2003. Peters served in several positions at the Dodge City Police Department from 1997 to 2001, including police officer, detective and field training officer. He was police sergeant at the Maize Unified School District 266 Police Department in 1997 and a sergeant at the Garden Plain Police Department from 1995 to 1997. Peters was a police officer at the Quincy Auxiliary Police Department from 1994 to 1995. He is a member of the 5 Cities Homeless Coalition, International Association of Chiefs of Police, National Rifle Association, City of Santa Maria Measure U2012 Citizens' Oversight Committee, California Police Chiefs Association, Rotary Club of Grover Beach and the California Peace Officers' Association. This position does not require Senate confirmation and there is no compensation. Peters is an American Independent

Statutory recommendation of CPCA
Craig Carter, Chief
Appointed: November 2016

Escondido Police Department
1163 North Centre City Parkway
Escondido, Ca. 92025
760-839-4417 (Desk)
760-644-1042 (cell)
ccarter@escondido.org

Craig Carter, 53, of Carlsbad, has been appointed to the State 9-1-1 Advisory Board. Carter has been police chief at the Escondido Police Department since 2013, where he has served in several positions since 1992, including lieutenant watch commander, detective lieutenant, captain, patrol watch commander and patrol sergeant. He has been an adjunct instructor at Palomar College since 1993. Carter is president of the San Diego Police Chiefs and Sheriffs Association and a member of the Alcohol Policy Panel of San Diego and the Palomar College Professional Development Advisory Board. He was co-chair of the Escondido Gang Reduction Intervention Program from 2010 to 2012 and chair of the Escondido Police Department Efficiency Committee from 2005 to 2012. This position does not require Senate confirmation and there is no compensation. Carter is a Republican.

State 9-1-1 Advisory Board Members

	Statutory recommendation of CSSA Kory Honea, Sheriff Appointed: July 2016 Butte County 33 County Center Drive Oroville CA 95965 Ph: 530-538-7321 khonea@buttecounty.net	Kory Honea, 45, of Chico, has served as sheriff-coroner at the Butte County Sheriff's Office since 2014, where he was undersheriff from 2010 to 2014 and deputy sheriff from 1993 to 2000. He served as an investigator at the Butte County District Attorney's Office from 2000 to 2010 and a boating safety officer and deputy sheriff trainee at the Shasta County Sheriff's Office from 1990 to 1993. He earned a Juris Doctor degree from the William Howard Taft University Law School. This position does not require Senate confirmation and there is no compensation. Honea is a Republican.
	Statutory recommendation of CSSA James W. Mele, Sheriff Appointed: May 2016 Tuolumne County 28 North Lower Sunset Drive Sonora, CA 95370 Ph:209-533-5855 jmele@co.tuolumne.ca.us	James Mele, 51, of Sonora, has been Sheriff of Tuolumne County since 2006. He has served in various positions at the Tuolumne County Sheriff's Office since 1988, including narcotics commander, sergeant, detective, narcotics investigator, patrol deputy and jail deputy. He is a member of the California State Sheriffs' Association, the Sonora Regional Medical Center Civic Advisory Board and the Tuolumne County Suicide Prevention Task Force. This position does not require Senate confirmation and there is no compensation. Mele is a Republican.
	Statutory recommendation of CFCA Chris Herren Appointed: July 2016 City of Santa Monica Office of Emergency Management 1685 Main St. Santa Monica, CA 90401 Ph: 310-458-2245 christopher.herren@smgov.net	Herren has been a public safety communications administrator at the City of Santa Monica Office of Emergency Management since 2014. He was dispatch services manager at the Placer County Sheriff's Office from 2010 to 2014 and acting dispatch manager at the Elk Grove Police Department from 2008 to 2010, where he was dispatch supervisor from 2006 to 2008. Herren was communications operator at the Vallejo Police Department from 1995 to 2006. He is a member of the California Fire Chiefs Association, National Emergency Number Association and the Association of Public Safety Communications Officials. This position does not require Senate confirmation and there is no compensation. Herren is registered without party preference.

State 9-1-1 Advisory Board Members

Statutory recommendation of CFCA
Michael Miller
Appointed: July 2016

Kern County Fire Department
5642 Victor Street
Bakersfield, CA 93308
Ph: 661-391-7029
mmiller@co.kern.ca.us

Miller has been deputy fire chief at the Kern County Fire Department since 2009, where he has held several positions since 1988, including deputy chief of operations, battalion chief for training and safety, operations, battalion chief of operations, captain of operations, engineer and firefighter. He was a reserve firefighter at the Bakersfield Fire Department from 1986 to 1988. Miller is a member of the National Emergency Number Association, Association of Public Safety Communications Officials, International Association of Fire Chiefs, California Fire Chiefs Association and Firefighting Resources of California Organized for Potential Emergencies. This position does not require Senate confirmation and there is no compensation.

Statutory recommendation of CALNENA
Paul Troxel, Dispatch Services Manager
Appointed: May 2016

Placer County Sheriff's Office
2929 Richardson Dr.
Auburn, CA 95603
Ph: 530-886-5350
ptroxel@placer.ca.gov

Paul Troxel, 47, of Roseville, has been appointed to the State 9-1-1 Advisory Board. Troxel has served as dispatch services manager at the Placer County Sheriff's Office since 2015. He served as supervising dispatcher at the Sacramento Police Department from 1994 to 2015 and as a staff sergeant in the U.S. Airforce from 1986 to 1994. This position does not require Senate confirmation and there is no compensation. Troxel is a Republican

Statutory recommendation of CALNENA
Charles Cullen, Director
Appointed: May 2016

Palo Alto Police Department
275 Forest Ave
Palo Alto, CA 94301
Ph:650-329-2331
charles.cullen@cityofpaloalto.org

Charles Cullen, 55, of Mountain View, has served in multiple positions at the Palo Alto Police Department since 1997, including technical services director. He was a telecommunicator for the Oregon State Police from 1995 to 1997 and an agent at U.S. Airways from 1983 to 1995. Cullen is a member of the California chapter of the National Emergency Number Association. He earned a Master of Science degree in emergency management administration from California State University, Long Beach. Cullen is a Democrat.

State 9-1-1 Advisory Board
Meeting Minutes

Thursday, November 10, 2016
9:00a.m.

LOCATION: California Governor's Office of Emergency Services Headquarters
3650 Schriever Avenue, Mather, California 95655-4203

MEMBERS PRESENT:
Mitch Medigovich Office of Emergency Services, (Cal OES)
Chief Scott Howland, California Highway Patrol (CHP)
David Wilson, California Police Chiefs Association (CPCA)
Charles Berdan, Association of Public-Safety Communication Officials (APCO)
Charles Cullen, California National Emergency Number Association (CALNENA)
Chris Herren, California Fire Chiefs Association (CFCA)
Paul Troxel, California National Emergency Number Association (CALNENA)
Michael Miller, California Fire Chiefs Association (CFCA)

MEMBERS ABSENT:
James W. Mele, California State Sheriffs' Association (CSSA)
Michael Langston, California Police Chiefs Association (CPCA)
Kory Honea, California State Sheriffs' Association (CSSA)

STAFF PRESENT:
Budge Currier, California Governor's Office of Emergency Services
Paul Dumetz, California Governor's Office of Emergency Services
Phillip Killion, California Governor's Office of Emergency Services
Reggie Salvador, California Governor's Office of Emergency Services

I. **CALL TO ORDER**
   - The meeting was called to order at 9:00 a.m. A quorum was achieved.

II. **CONSIDERATION AND APPROVAL OF SEPTEMBER 1, 2016 MINUTES**

   Motion: Mr. Willson motioned to accept the September 1, 2016 Meeting Minutes; seconded by Mr. Cullen. Motion passed

   Scott Howland (Y)
   David Wilson (Y)
   Charles Berdan (Y)
   Charles Cullen (Y)
   Chris Herren (Y)
   Paul Troxel (Y)
   Michael Miller (Y)

III. **CLOSED SESSION – MITCH MEDIGOVICH, DEPUTY DIRECTOR, GOVERNOR'S OFFICE OF EMERGENCY SERVICES MET IN CLOSED SESSION WITH THE BOARD MEMBERS TO DISCUSS AND REVIEW DETAILED INFORMATION REGARDING 9-1-1 OUTAGES IN CALIFORNIA**
   - Outage Report - CLOSED SESSION after vote pursuant to G.C. Section 11126(c)(18)

IV. **LEGISLATIVE UPDATE - CAL OES LEGISLATIVE & EXTERNAL AFFAIRS WILL PROVIDE INFORMATION REGARDING CURRENT AND/OR FUTURE LEGISLATION THAT MAY IMPACT CALIFORNIA'S 9-1-1 SYSTEM**
- Mr. Salvador, Chief of Legislative and External Affairs provided information on current bills that may affect 9-1-1 in California.
- AB-1564 will require CalOES to work with CHP and Wireless Services Providers (WSP) to implement reroutes.

V. **WIRELESS SERVICE PROVIDER PRESENTATIONS**
- AT&T, Verizon, T-Mobile provided information regarding the status of the reroute project and future activities.

VI. **CALL DATA REPORTING AND ACCESSIBILITY**
- Mr. Wilson requested an open dialog regarding Public Safety Answering Point (PSAP) call data reporting.
  The CA 9-1-1 Emergency Communications Branchs', Alicia Fuller provided information regarding the creation of new reports in ECaTS. The reports will be tower based v/s PSAP based. The new reports will be able to show all the carriers associated with each tower and the corresponding sectors.

VII. **CITY OF BRENTWOOD REQUEST FOR PSAP**
- The City of Brentwood provided additional information previously requested by the State 9-1-1 Advisory Board.
- The City of Brentwood has met the funding criteria as stated in Chapter III of the State of California 9-1-1 Operations Manual (9-1-1 Manual) and has been approved for PSAP funding from the CA 9-1-1 Branch.

VIII. **CAL OES' 9-1-1 EMERGENCY COMMUNICATIONS BRANCH UPDATE**
- Mr. Currier Provided the State Emergency Telephone Number Account (SETNA) Fund Condition Statement, SETNA Fund Tracking document and SETNA graph.
- Mr. Currier provided the Wireless Deployment Document to the Board. The following agencies have expressed concern with taking wireless 9-1-1 calls:
  1. Sacramento County
  2. Sacramento City
  3. Stanislaus Regional
- Text to 9-1-1 is progressing in California. Los Angeles County selected TCC as their vendor for Text to 9-1-1.
- The CA 9-1-1 Branch will work with and provide information to help educate PSAPs on accepting Text to 9-1-1.
- The CA 9-1-1 Branch will continue to work with Alameda, Stanislaus, and Sacramento Counties regarding the sectors that are still pending reroutes.
- The CA 9-1-1 Branch is reviewing L.R Kimball's Technology Assessment for Next Generation 9-1-1 and will provide feedback to L.R. Kimball.
- Mr. Currier provided the SETNA fund expenditure document.

IX. **LONG RANGE PLANNING COMMITTEE (LRPC) UPDATE**
- Mr. Cullen provided Information regarding regionalization (virtual consolidation) and physical consolidation of PSAPs in California.

X. **AGENDA ITEMS FOR FUTURE MEETINGS**
- County Coordinators Task Force to provide input regarding Text to 9-1-1.

XI. **PUBLIC COMMENTS**
- N/A

XII. **ADJOURNMENT**
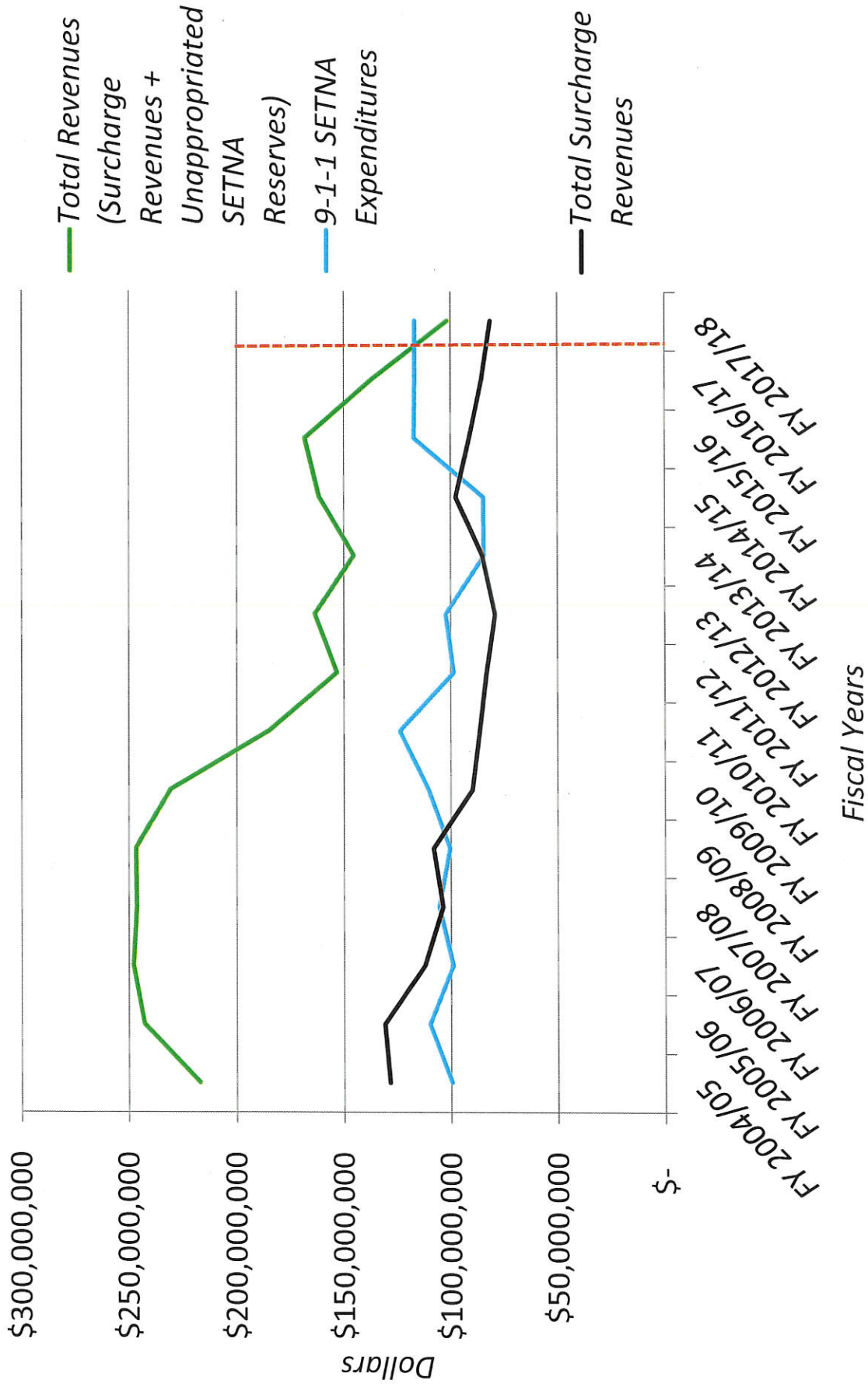
0690   Office of Emergency Services

FUND CONDITION STATEMENTS

	2015-16*	2016-17*	2017-18*
0022 State Emergency Telephone Number Account [s]			
BEGINNING BALANCE	$76,773	$53,451	$29,343
Prior Year Adjustments	-4,399	-	-
Adjusted Beginning Balance	$72,374	$53,451	$29,343
REVENUES, TRANSFERS, AND OTHER ADJUSTMENTS			
Revenues:			
4140500 Emergency Telephone User's Surcharge	81,605	81,605	81,605
4171000 Cost Recoveries - Delinquent Receivables	1	-	-
4171100 Cost Recoveries - Other	-	1	1
Transfers and Other Adjustments			
Revenue Transfer from Prepaid MTS 911 Account (3266) to State Emergency Telephone Number Account (0022) per Chapter 885, Statutes of 2014 (AB 1717) Section 8 Revenue and Taxation Code Section 42023 (a)	-	11,181	9,900
Total Revenues, Transfers, and Other Adjustments	$81,606	$92,787	$91,506
Total Resources	$153,980	$146,238	$120,849
EXPENDITURE AND EXPENDITURE ADJUSTMENTS			
Expenditures:			
0690 Office of Emergency Services (State Operations)	2,586	2,430	2,430
0690 Office of Emergency Services (Local Assistance)	92,976	108,619	108,619
0860 State Board of Equalization (State Operations)	1,125	1,759	1,726
3540 Department of Forestry and Fire Protection (State Operations)	3,827	3,815	3,815
8880 Financial Information System for California (State Operations)	15	12	10
9900 Statewide General Administrative Expenditures (Pro Rata) (State Operations)	-	260	471
Total Expenditures and Expenditure Adjustments	$100,529	$116,895	$117,071
FUND BALANCE	$53,451	$29,343	$3,778
Reserve for economic uncertainties	53,451	29,343	3,778

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* Dollars in thousands, except in Salary Range. Numbers may not add or match to other statements due to rounding of budget details.

State Emergency Telephone Number Account (SETNA)
Revenues and Expenditures

Legend:
- Total Revenues (Surcharge Revenues + Unappropriated SETNA Reserves)
- 9-1-1 SETNA Expenditures
- Total Surcharge Revenues

Y-axis (Dollars):
- $300,000,000
- $250,000,000
- $200,000,000
- $150,000,000
- $100,000,000
- $50,000,000
- $-

X-axis (Fiscal Years):
FY 2004/05, FY 2005/06, FY 2006/07, FY 2007/08, FY 2008/09, FY 2009/10, FY 2010/11, FY 2011/12, FY 2012/13, FY 2013/14, FY 2014/15, FY 2015/16, FY 2016/17, FY 2017/18

State Emergency Telephone Number Account
State Operations and Local Assistance Expenditures
Fiscal Year 2015/2016

Expense Category	State Operations Expenditures	Notes
Department of Forestry and Fire Protection (CALFIRE)	$4,051,000	Department of Forestry and Fire Protection' Computer Aided Dispatch system
CA 9-1-1 Branch (Cal OES)	$2,586,000	9-1-1 Staff benefits and salary
State Board of Equalization (BOE)	$1,783,000	Administration of the Emergency Telephone Users Surcharge Law and the Prepaid Mobile Telephony Services Surcharge Collection Act
Financial Information System for California (Fi$CAL)	$15,000	Statewide financial information system
State Operations Sub Total	$8,435,000	

Expense Category	Local Assistance Expenditures	Notes
Database	$30,709,386	AT&T, Verizon, Frontier, and other ILECs
9-1-1 CPE, maintenance, and incremental costs	$29,589,673	9-1-1 Customer Premise Equipment (CPE) installations and maintenance/ additional maintenance associated with PSAP allotment purchases, logging recorders, headsets, etc.
9-1-1 Network	$17,343,109	Trunks, alternate answer, automatic location identification, automatic number identification, frame relay, selective router, and small Local Exchange Carriers
Next Generation 9-1-1	$5,248,740	Hosted Solution, network, and pilot projects (Northeast Grant 9-1-1, Imperial County, Mendocino County, Pasadena (RING), and Ventura County)
9-1-1 Network (Wireless)	$2,940,969	Wireless network and reimbursement(.13/call), wireless automatic location identification, trunks, tandem to tandem, etc.
GIS equipment and maintenance	$1,288,440	Geographical Information System (GIS) allotment for items (software, hardware, and services) and maintenance
ECaTS	$1,020,541	Emergency Call and Tracking System (ECaTS) costs
County Coordinator	$483,677	County Coordinator reimbursement
CLEC Reimbursement	$380,692	Monthly and quarterly Competitive Local Exchange Carriers (CLECs) reimbursement costs
CHP Reimbursement	$352,348	Quarterly personnel reimbursement
Foreign Language Interpretation	$322,255	California Multiple Award Schedules and State Contracts
Annual Training Allotment	$182,554	Approved training for County Coordinators and PSAP reimbursement
Text-to-9-1-1	$35,000	Transfer text messages between call centers and record call statistics
Other Reimbursements	$23,522	PSAP Manager's meeting, Educational Materials, 9-1-1 Advisory Board Member's travel/per diem, 9-1-1 Transcription Services, and County Coordinator's Task Force
Local Assistance Sub Total	$89,920,906	
TOTAL	$98,355,906	

California 9-1-1 Advisory Board
Long Range Planning Committee
9-1-1 Workgroup Task
"The Benefits and Drawbacks of 9-1-1 Public Safety Answering Point Regionalization"

Scope of Work

In May 2016, The California 9-1-1 Advisory Board discussed and subsequently directed the committee on Long Range Planning (LRPC) to prepare a "complete picture of what PSAP (Public Safety Answering Point) regionalization would look like in California. This topic comes on the heels of California's planning and potential funding for the Next Generation 9-1-1- network. As the LRPC considered the complexity of the issue, it provided direction to the 9-1-1 Workgroup to report back with a draft White Paper on the topic. This work has begun, examining the topic from several different angles. The assignment of the workgroup is not to recommend policy but instead, develop options to consider, including background, facts, statistics, and options related to regionalization. Furthermore, this document is to primarily look at the 9-1-1 component, while recognizing that there are other mission critical technologies such as computer-aided dispatch (CAD), radio and other components to be considered when taking a holistic view of regionalization.

This document is also by necessity based on today's technology – not Next Generation 9-1-1 (NG9-1-1). Research and planning is on-going at the State level for NG9-1-1, so while many aspects of a regionalization aren't affected by NG9-1-1, 9-1-1 CPE and the network must be reconsidered once more information is available.

Finally, we want to emphasize that cost savings because of regionalization is not a given. Depending on the type of regionalization, startup costs may be high. Additional needs for 9-1-1 network connections may outweigh any savings in backroom equipment.

Makeup of the Workgroup:
- Advisory Board Member – Chuck Berdan
- 9-1-1 Branch Representative – Sofia Long
- County Coordinator Task Force Representative – Ella Sotelo
- California State Sheriffs Association Representative – Lee Ann Magoski
- California Police Chiefs Association Representative – Shelley McKerren
- Large PSAP Representative – Cynthia Freeman
- Medium PSAP Representative – Lynn Bowler
- Small PSAP Representative – Greg Pascal
- Secondary PSAP Representative – Don Wise
- Invited Subject Matter Experts: Jaime Young, Debbie Grady

Methodology

The 9-1-1 Workgroup is comprised of subject matter experts in all aspects of PSAP operations and management from across California, and large, medium and small PSAPs are represented. The below questions were assigned to workgroup members based on the skills, knowledge, and interest of each workgroup member. All work was compiled into this document, and all member of the workgroup gave input on all portions of the document. Most of the work was

done via conference calls, but one two day in-person meeting was authorized, which made discussions much more productive.

Direction from the LRPC

The LRPC asked the Working Committee to examine the following questions:
1. What are the critical components of consolidation?
2. Are there incentives that would drive consolidation?
3. What are the major barriers to consolidation?
4. Is there more than one model for consolidation?
5. What are the lessons learned from existing regionalization efforts?

The "lessons learned" aspect of the report was added at the November LRPC meeting, and will be added as an addendum to this document later.

Definitions

The following are definitions that will be used in this document:

Regionalization

Regionalization can be defined as two or more communities (or organizations, or agencies) that join in a formal, mutually-beneficial working relationship to optimize services provided to the customers of their communities (or organizations, or agencies). (National Association of State 9-1-1 Administrators (NASNA) - http://www.nasna911.org/). The 9-1-1 Workgroup believes that this can be accomplished by sharing technical resources, or by a physical co-location of equipment and personnel.

Consolidation - A facility where one or more Public Safety Agencies choose to operate as a single 9-1-1 entity. (Ref: NENA 56-003 Ref: NENA-INF-002) This can include consolidation by discipline — i.e. law enforcement answering all 9-1-1 calls, however, Fire/EMS calls are transferred to a consolidated secondary PSAP. An example would be the Yolo County Emergency Services Agency, which has a common facility, common equipment, and a single PSAP organization handling multiple agencies. Joint Powers Agreements/Authority (JPA) or Intergovernmental Agreements (IGA) governance models generally fall under this description.

Shared Facility - A shared facility is where existing PSAPs centers are brought together under one roof or facility. The PSAPs may be autonomous entities or possibly share management, equipment and logistical resources. Examples would be Kern County Fire, where they share a facility, share equipment, and share PSAP management but maintain separate agencies. Another example would be the City of San Jose that shares the facility, and shares equipment, but management of police and fire in their respective Communications Centers remain autonomous.

Centralized Call Taking – In this model, 9-1-1 calls, which would normally be directed to individual PSAPs, are routed to a centralized call taking facility. These call takers perform immediate analysis and triage, then transfer the event to the appropriate law enforcement, or fire/ems agency of the jurisdictions involved for dispatch.   This is used by the State of Rhode Island. There are no known uses of this model in California.

Hosted (Hybrid/Virtual) - This model can include variations wherein PSAPs maintain separate physical locations but share common call handling equipment (located at a PSAP, Telco Central Office, or other facility), and may include other shared services such as, radio, CAD or other public safety dispatching equipment over a secure managed network.   An example would be Placer County, where individual PSAP's located independently from each other share call handling equipment (CHE).

Incentive – Any assistance that would make it easier for an agency to migrate towards any "Regionalization" model. This may be in the form of financial or regulatory incentives. This includes any type of co-location, from equipment sharing to full scale consolidation.

Background of Regionalization
There has been an increase in the regionalization of 9-1-1 systems throughout the United States in recent years, driven, in part due to:
- The need to reduce costs
- The desire to use costly 9-1-1 system components more efficiently
- The need to minimize the number of times a 9-1-1 call must be transferred
- The need to enhance purchasing power
- The need to leverage technological advances to improve or expand services to citizens

Slow economic environments have moved many state and local government leaders to explore regionalization in many areas of government and public safety, to determine the feasibility of reducing costs while simultaneously enhance services. Even in good economic times, small stand-alone agencies – particularly in rural areas – face challenges in maintaining adequate resources, equipment, training, and expertise necessary to meet the basic proficiencies and operational capabilities that are required to meet citizens' expectations of 9-1-1 services.

Specific to the delivery of 9-1-1 services, there are unique drivers that include:
- The State's declining 9-1-1 fee revenues. Legacy legislation pertaining to landline telephone service and fee structures are no longer applicable due the transition to IP based or cellular network usage.
- Next Generation 9-1-1 (NG9-1-1) system funding, since NG9-1-1 is a system of systems involving shared services and infrastructure. NG9-1-1 cannot be achieved by a single

PSAP in isolation.
- Political Considerations are an over-arching consideration when talking about regionalization. The political landscape of all stakeholders should be considered as regionalization efforts affect several different political levels, i.e.:
  - County Board of Supervisors
  - City Councils
  - Elected Sheriffs
  - Special District Board of Directors
  - Labor Unions
  - Community Groups

  The primary factor in the politics of local government is control. Who will control this new PSAP? How much "say" will the individual agencies have related to the management, finances and operational procedures of this new PSAP?

- Financing regionalization can also have political overtones. What is a fair distribution of startup and on-going costs? Is it based on population, area covered, assessed valuation, call volume, or size of the agencies involved? Each factor can give a different result, and if you combine several factors into a formula, which ones to use? Agencies will be looking for the most reasonable solution for their agency, so the potential for conflicts over solutions can have an adverse effect on regionalization efforts. For all these reasons and more, regionalization continues to be increasingly attractive.

What are the Critical Considerations for Regionalization?
While the 9-1-1 Workgroup is primarily considering the implications of regionalization on 9-1-1 operations, it would be remiss to not make note that CAD, radio, public safety technologies, staffing, facilities, operations, and policies/procedures are also critical to any regionalization effort.

To that end, the 9-1-1 Workgroup recommends that a formal strategic plan should be developed that will provide agencies with a roadmap of which to follow when determining if regionalization is feasible for them. These areas include but are not limited to:

1. Governance - The establishment of a structured governance model. It is critical that the model be agreed upon before moving forward with any technical solutions. Options for governance include joint powers agency/authority, contract for services, or a separate governmental agency. Key considerations include but not limited are:
   - Selection of a lead sponsor (if applicable)
   - Voting rights of stakeholders
   - Bylaws to include policy and decision making processes or authority
   - Funding and fee formula and options

   The pros and cons of each option are not fully explored in this document due to the extensive number of variables that can be present in each situation.

2. Project Management - Select a Project Management Team to strategically plan the regionalization effort. The decision of using in-house staff or hiring an outside consultant to manage the project, will depend on the availability of qualified staff, and the level of complexity of the regionalization effort. The Project Team should work closely with the California Governor's Office of Emergency Services, Public Safety Communications Division, 9-1-1 Emergency Communications Branch (9-1-1 Branch) when it concerns CPE equipment. Stakeholders need to be identified and included in the planning process to gain a successful conclusion.

3. Timing - The equipment replacement cycle of all stakeholders, and the equipment compatibility can potentially have fiscal consequences to the State Emergency Telephone Number Account (SETNA). And the status of each stakeholder's commitment to NG9-1-1, including Text to 9-1-1 will need to be considered.

4. Facilities - A needs assessment of or for a new or existing facility should be conducted. What is the potential location of the (hosted) equipment? Is there enough space and power available? Is there adequate security, both cyber and physical? What is the network capacity of the facility? Is there enough bandwidth coming in and out of the facility? Will additional data circuits be needed?

5. Telephony Network Sizing - The considerations related to 9-1-1 telephony are related to planning, technical considerations, and implementation – is the telephone infrastructure able to handle the needs of the regionalized PSAP? It is important for the project management team to have subject matter experts in the local telephone infrastructure. It is not necessarily the same number of positions/trunks that the individual PSAPs may have had. This is where some economies of scale come in. The number of answering positions may be reduced because of the need for fewer back up/overflow positions. The number of 9-1-1 trunks are also likely to be reduced for the same overflow reasons. But a major decision that will need to be considered is the ability to have an alternate answer facility for the new PSAP. Many times, if the new regionalized PSAP is now the largest PSAP, the ability for other PSAPs in the region to handle the call volume in an alternate answer scenario may not be feasible. If that is the case, a physical alternate site may need to be included in the regionalization costs.

6. Support and Maintenance - A regionalized PSAP will need to consider the scope of maintenance and support services. The need for geo-diversity of both controllers and incoming data circuits becomes more important for network survivability in a disaster. The ability to manage GIS services for accurate mapping may require additional staff or outside support. The need for constant cyber-security monitoring and notification systems in the event of hacking and/or denial of service attacks may also require

additional staff or outside support.

7. Analytics, Applications and Reporting - Measuring the performance of a regionalized PSAP will also require attention. Call Data Reporting Databases such as ECaTS and On-premise MIS – Aurora, Analytics etc. may be used to examine compliance and trends. Larger PSAPs may not be able to delegate such tasks to on-duty staff. There is also the proliferation of other 3rd party applications (Smart 9-1-1, Rapid SOS, etc.) will require additional time and effort to coordinate and maintain. Other 3rd party applications (PulsePoint, etc.) that are connected to one or more of the CAD systems will also have to be consolidated. This will require policy decisions on what information is made available, and the physical connections to these applications need to be coordinated.

8. Computer-Aided Dispatch (CAD) Systems – If the regionalization effort includes merging disparate CAD systems, historical event data can be a major issue. It is uncommon for PSAPs in a region to have all the same CAD system. Telecommunicators can be trained to learn a new system. But extracting event data and custom information (special notes, response cards, etc.) may require manual translation by the PSAPs. Merging or interfacing record management system (RMS) databases & analytics can also be difficult, depending on the ability to export and import data from disparate vendors.

9. GIS - The need for a common GIS platform and coordinated GIS Data is critical in today's PSAP. Again, depending on the age of the existing CAD systems (or lack of a CAD system), mapping platforms may not be set to the same mapping standard. Conversion of GIS data can be complex and time-consuming.

10. Confidential Networks - For law enforcement regionalization, NLETS/CLETS (message switch) policy issues need to be considered. Usually PSAPs in a region are already connected to a common message switch, but if there are multiple switches involved, then coordinating this effort will need to be put into the project plan.

11. Other 3rd party applications (PulsePoint, etc.) that are connected to one or more of the CAD systems will also have to be consolidated. This will require policy decisions on what information is made available, and the physical connections to these applications need to be coordinated.

12. Mobile Computer Terminals (MCTs) - A major consideration is the compatibility of existing mobile computer software with a disparate CAD system. Generally, if proprietary software is used in the MCT that will only talk to a CAD system, can the MCT accept new mobile computer software that is compatible? Or will new MCTs be deployed? What is the current transport system for MCT data - Private or Commercial? The effectiveness of commercial carriers need to be evaluated, and may require a new

modem for the vehicles. If it is a private system, what is the cost of installing equipment in vehicles that currently do not have it?

13. Radio Systems - Interoperability and regional radio systems have reduced some of the considerations in a regionalized PSAP. But there can still be issues related to the interface to disparate radio systems at the dispatch consoles:
    - Does the regionalization require agencies to join a new or pre-existing system?
    - If a move to a different radio system is called for, what changes to the radio System Infrastructure (Equipment, Towers) and radio system licensing need to be made?
    - Regional systems usually require subscriber fees, which needs to be considered as a part of the cost of a regionalization.
    - The maintenance of equipment and software upgrades will need to be decided upon and the costs allocated.

14. Staffing Requirements - The general assumption is that there will be a reduction of staff as a part of the economies of scale in a regionalization. This may be true, depending on the staffing levels at the participating PSAPs and how support services are handled. The following are the issues:
    - Telecommunicator staffing in the regionalized PSAP will depend on operational requirements. Is each agency going to retain their current staff at the same level? Or will existing staff positions be eliminated and some or all of them be hired by the regionalized PSAP? Labor unions or bargaining units and agency human resources should be involved to discuss seniority, work schedules, vacation bidding, time off accruals, and more. Specialty assignments such as Tactical dispatching and/or Hostage Negotiations are common in some PSAPs, but not all. Work attire and personal appearance policies can also cause friction amongst the staff.
    - Supervisory and management staffing is also a critical concern, as is examining their job scope and span of control. Job scope at regionalized PSAP may not be compatible with duties currently assigned within their agency, i.e. they supervise the records unit and records is not a part of the regionalization effort. Does a new manager need to be hired, or can an existing manager adequately complete functions of the new job scope? Can an economy of scale be realized by reducing the number of supervisory/management staff needed for the regionalized PSAP?
    - Many agencies utilize groups within their agency for services such as human resources, payroll, etc. Will these services be included in the regionalized PSAP? Does the regionalized PSAP's organizational structure allow for added personnel to handle these job tasks? This can potentially increase both the start-up and on-going costs of operation. It's also possible to contract back to one of the agencies involved in the regionalized PSAP for such services, thus saving the personnel costs of hiring such a support staff.
    - Training and Quality Assurance (QA) may become more important in a regionalized

PSAP. High visibility and scrutiny is placed on the regionalized PSAP by the participating agencies who may no longer have direct control of staffing and operational policies. Training and QA will play a critical role due to the new policies and procedures the dispatch staff needs to learn and adapt to. Many times, these duties are delegated to existing staff to complete as time allows. In a regionalized PSAP, not only will personnel potentially be busier on a day-to-day basis, but the numbers of people needing training services, and the increased event volume needed for QA could require either full-time staff, or contracting with a third party for these services.

- Technical support staff may have also been a part of a larger division within an agency, such as a radio shop, or Information Services division, and may not be a player in a regionalized PSAP. Again, this may require either a donation of support time from one or more of the participating agencies, a contract for services, or hiring a technical support staff. There are critical components of the regionalized PSAP that may need dedicated technical staff – CAD, RMS, system clock synchronization, and audio recording systems (release of information recordings and other legal obligations). These components are of such a critical nature, and potentially use specialized skills and knowledge that part-time or as-needed staff is insufficient.
- Facility support staff can usually be provided by the hosting agency, but if the regionalized PSAP has created its own facility, then hiring contractors (or a contract with a participating agency) will be required. Aside from the physical building needs (janitorial services, minor repairs, etc.), consideration needs to be given to UPS & Site Generators (maintenance, testing and Air Quality Management District policies), other electrical needs (there's never enough power), HVAC maintenance, PSAP-specific furniture and chairs, etc.

15. Standardization of policies and procedures is also a critical component. Optimized performance is based on policies, procedures and practices that can be applied unilaterally. Legal requirements (local codes and ordinances for example) may require some agency-specific policies/procedures, but for the most part policies and procedures need to be standardized for all participating agencies. Things such as radio codes, CAD event type and disposition codes, and call answering/processing procedures need to be standardized.

Are There Incentives That Would Drive Regionalization?
Incentives will always be dependent on a lot of factors, and can only be considered as "potential" – depending on the individual circumstances of the project. These incentives are:
- Long-Term Cost Savings
- Reduction of Response Times
- Continuity of Operations

California 9-1-1 Advisory Board
Long Range Planning Committee
9-1-1 Workgroup Task
"The Benefits and Drawbacks of 9-1-1 Public Safety Answering Point Regionalization"

- Improved Service
- Benefits to the Employee
- Enhanced Technology

1. Long-Term Cost Savings - There is an assumption that reducing the number of PSAP's in California effects a cost savings through "economies of scale" whereby an advantage occurs by reducing variable costs per PSAP.

   In some regions, space planning has occurred with existing space currently available. Whether partnering with neighboring PSAP's in a daily operational mode, or via offering a backup agreement for emergencies and/or critical incidents, this is a viable alternative when existing space is available now. Existing Entity owned buildings should be evaluated to determine if an option exists on a building of sufficient size, location and repair that might be shared regionally.

   A group of PSAPs are more likely to consider regionalization favorably if each agency has equipment that is of a similar age/upgrade status so that SETNA funding can be utilized. In regions, where this is not the case, a proactive plan developed by the 9-1-1 Branch would assist PSAPs in future planning.

   Reduced upper management costs – While span of control for first line supervisors is likely to remain unchanged, the cost for Dispatch Manager's and Directors is likely to be reduced due to one individual managing a project and/or technology versus one manager for each current PSAP.

   The installation costs, as well as on-going costs are likely to be reduced due to equipment being housed at fewer sites. An improvement is likely to occur in faster identification and resolution to equipment problems due to the same reduction.

   Depending the type of regionalization, the cost of transport circuits may reduce or eliminate any cost savings due to the reduction in the number of servers/controllers. Utilizing state contracts for such services (i.e. CALNET) may reduce these costs.

   Staffing models with shared staff may indicate a reduced number of overall staff members, also reducing the need to staff at an overtime or forced overtime rate. Potential retention rates may increase if qualified dispatchers are also retained and vacancies are reduced. If these factors were present a reduced number of overtime and forced overtime hours may occur.

2. Reduction of Response Times - With the wireless caller being routed to a regional center

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where the Call Taker can process the call for a larger geographical region, there exists the potential for fewer transfers.

3. Improved Service - A more consistent level of service may be provided due to clearly stated and enforced performance standards. Staff members who have more experience, and certifications such as Tactical Dispatch and Hostage Negotiators may be utilized more effectively as the situation arises. Presumably there would be more incidents where these skills would be needed and therefore dispatchers possessing these skills. There is also a built-in surge capacity – the ability to effectively respond to short periods of increased call load and/or radio traffic.

   Better trained telecommunicators means that they are exposed to a wider variety of situations than a smaller agency. More employees mean a greater level of experience spread over the work shifts. Depth of staff also allows for the ability to have specialized teams (incident/tactical/hostage), and increased training opportunities.

4. Management - The ability to have consistent, proficient, and professional management in the PSAP is a very large incentive. The management of PSAPs and dispatch in general have traditionally been a challenging resource area. Unfortunately staffing, overtime, retention and training problems are historically critically challenging. Add wireless routing, funding and the eventual transition to NG9-1-1 and this may become an area that makes sense to regionalize, lessening the potential liability as well as the resources necessary to keep pace and manage such an ever-changing industry. Many small and medium size PSAPs still do not have dispatch supervisors on duty 24/7. In these instances, typically a field sergeant, having no 9-1-1 exposure and/or knowledge is designated as the first line supervisor. In an emergency, these individuals are needed for a field response leaving the dispatch team effectively unsupervised. A regionalized PSAP can mandate that a supervisor is on duty at all times.

5. Benefits - Benefits to employees of a regionalized PSAP will depend largely on the type of governance that is used. Benefit packages may be enhanced with a larger staff. Salaries will need to be leveled, which usually means that some staff will see a pay increase (and conversely some staff may see a pay freeze until others catch up). With more supervisory and specialized positions in a larger PSAP, there are more opportunities for career advancement. Additional staff creates an opportunity for flexibility in addressing staffing and overtime needs in a way that may not impact staff as adversely as a single agency PSAP.

6. Enhanced Technology – Regionalization can have the additional incentive of giving PSAPs involved in a regionalization project of new and more technologically advanced equipment that they could not afford as a stand-alone PSAP. Depending on the level of regionalization, upgrades not only to 9-1-1 CPE, but CAD and radio systems are also possible.

What are the Major Barriers to Regionalization?
This section will discuss primary and secondary barriers and then personnel, technology and operational barriers.

Primary and Secondary Barriers
1. The first and most common barrier is the lack of initial start-up funding to begin a regionalization project. Start-up costs are generally budgetary estimates, and if not given time to validate, can increase as the project transitions from design to implementation. Once a project funding package is delivered, 'sticker shock' can be anticipated as a project that encompasses both specialized human resources and mission critical technology often carries a high price tag.

2. Annual costs should be projected to allow stakeholders the benefit of budgeting for ensuing years. Agreed upon escalators can be an obstacle as some want built-in protection which can put revenue at a deficit if expenditures and cost increases outpace the amount coming in. Fee distribution formulas for agencies participating in the regionalization can also be an obstacle. There are many formulas that have distinct advantages and disadvantages depending on the size of the participating agency. Some Departments may fear exorbitant costs per call.

3. Lack of political will/political control over the dispatch center is also a concern. Agencies that continue to have an in-house dispatch center may have the perspective that they are giving up control of policies and long standing practices that the dispatch center may provide to the agency/community. Political control is also seen when choosing a center's equipment. Which CAD should be adopted, whether that CAD will integrate with the agency RMS, Mobile and mapping systems, what phone system should be installed and what vendors should provide maintenance. Long standing relationships with the vendor community could change depending on the Dispatch center and the political control it extends. Many cities want to know their 9-1-1 PSAPs are just "around the corner" rather than some location that may not even be within the boundaries of the jurisdiction.

4. Agencies, when involved in a discussion, also may lack knowledge of regionalization and merging services or contracting services. Some agencies may have a sworn manager with a strong management background but lack 9-1-1 specific knowledge to make an informed decision. This lack of knowledge combined with the fear of the unknown are also barriers to regionalization.

5. The secondary barriers of a regionalization effort are the more concrete barriers that agencies may experience. Personal contact lost between line staff and dispatchers is a general concern with all agencies entering centers that are not their own. The relationships

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built and the anticipating needs based on a long working relationship are also barriers that must be considered.

6. Community relationships and community knowledge may be lost when regionalization occurs. Common place names that citizens referred to and/or the regular callers a center is accustomed to dealing with may be lost. While there is a refractory period when any regionalization occurs, the geographical knowledge is typically learned and a strong level of customer service and response can help rebuild community relationships.

7. The "other duties" a dispatcher performs for a singular agency may also be a secondary barrier. Some agencies provide general clerical entry; the dispatcher may be the front desk receptionist or complete other secondary duties. When a center regionalizes these duties must be reassigned, which in some cases may require additional personnel costs.

Personnel, Technology and Operational Barriers
1. Given the historically high turnover and vacancy rates within most California PSAPs, the heart of any Regionalization process will be the personnel barriers that must be overcome. The personnel barriers can often be as large of a challenge as the primary barriers.

    a. Seniority of the merging dispatch centers. How will seniority be calculated? This can be different in a new center just starting, versus a long-standing center merging with a smaller center. Seniority and how it is determined can cause both conflict and loss of experienced personnel as they may choose to go elsewhere.

    b. Background and psychological checks will likely take place due to the hire date of the employee and the rules of the agency. Some tenured dispatchers have been grandfathered into to their positions and may have been evaluated with these tools, and may not be California Peace Officers Standards and Training (POST) certified. Further a background or psychological check may disqualify a group of dispatchers the center was planning on utilizing. The affected dispatcher then may use the grievance process under their current employer's rules and regulations causing additional barriers.

    c. Wage and benefit impacts may also occur. It would be ideal if all agencies regionalizing set the wage levels at a high level whereby all employees received raises, but this not likely. There may be changes to wages and benefits depending on the employer. This can also impact leave balances that employee may have accrued over the years. How will this be converted and paid out?

    d. Retirement system changes may also have to be addressed. Are the agencies reciprocal with their retirement? Do the employees gain or lose retirement percentages. The

biggest question for many dispatchers will be, does my age of retirement and ultimately retirement income change?

  e. Union representation, MOU and personnel rules will also have to be addressed. In some cases, when regionalization occurs, union representation is involved. The unions want to ensure their members are successfully integrated into the new union. Sometime due to different MOU and personnel rules this integration may have pitfalls. Need to ensure that all are being represented fairly and equally.

2. The change in work location and transportation impacts on personnel can be a barrier. Is the travel and residential location to the center manageable and cost effective for the dispatcher to make the move to the new regional PSAP.

3. Technology barriers are also extremely important for both business and safety reasons. While new technology does make the work easier, merging disparate systems and implementing others is a large project rife with challenges to dispatchers providing service in a new PSAP.

4. Computer Aided Dispatch (CAD) systems are one of the most expensive IT projects for any agency. This project requires a substantial investment of time, money and decision making. CAD systems can also drive the agency workflow as it relates at minimum to responder call signs, call types, priorities and dispatch protocol. Which CAD should be used and why? Once a CAD is chosen, there must be the integration with multiple RMS systems. How does the regional/consolidated center integrate these systems with many vendors and resolve potential finger pointing as the systems are built and operated?

5. Camera systems for ALPR, CCTV or similar must also be explored. What is the expectation on the regional/consolidated center to monitor ancillary systems? Many agencies may have different iterations of systems that may not be able to be merged. How will this impact the ability to effectively monitor? There are other systems to consider such as Low Jack, Shot Spotter, etc. that may need to be integrated as well. Not to mention 3rd party applications such as Rapid SOS, etc.

6. Phone systems, determining how and when administrative phones should be forwarded to the regional/consolidated center. Some local PSAPs may have been the answering service for the entire agency, how will this transition?

7. NLETS/CLETS message switches and making sure items are routed appropriately are also issues that must be addressed.

8. Disparate radio systems must also be addressed. Having interoperability and patching frequencies. Radios are the second most expensive system; they have the largest infrastructure and have a large impact on safety.

9. Operational barriers are the last piece in the equation, if one has overcome personnel and technology challenge, the last items it to make sure the regional center is operationally functioning. Operations training may be disjointed due to transitional challenges and probationary requirements. Strong administrative policies will need to be drafted in anticipation of these operational pitfalls.

10. These include disparate codes for both radio and CAD. Are the codes compatible with one another and are their redundancies that must be addressed? How will multiple SOPs be reduced?

11. With the systems and 3rd party applications mentioned in technology, if carried over how will they impact operations? Will additional staffing and training be needed to meet these growing applications?

12. Will the center be operationally a full-service center with dedicated call takers, or will it be a center where they must get off the phone as soon as possible? What is the standard that is requested and what the reality is of can be provided?

Continuity of Operations
A regionalized PSAP requires planning for a physical back up site as well as an alternate answering designation for 9-1-1 calls. Disaster planning becomes difficult as the regionalized PSAP may become the largest PSAP in the region. This means there are no other PSAPs large enough to assist when there is a disaster and the regionalized PSAP is not operational. The regionalized PSAP will need a backup facility. This might be achieved by a hot-back up with CAD, phones, etc. all duplicated in a designated facility that is in a different geographic location, or a room/building that has furniture, power, etc. that can be turned into a back-up PSAP in short order using portable computers, radios, cell phones, etc. The hot back-up option is preferred due to the ability to be up and running immediately, but the cost may be prohibitive.

Is There More Than One Model for Regionalization?
As California is a uniquely diverse state, the same diversity is observed in California PSAPs and their parent organizations. From very small one or two person PSAPs, to PSAPs with 20 or more people, and organizations that serve a single agency to organizations that dispatch for multiple agencies and multiple disciplines. We know that one model will not fit all PSAPs.

California is the third largest state in the nation in total square miles (163,695 square miles), but it is the largest state in terms of population (37,253,956). Additionally, it is thirteenth in the

nation in population density (239 people per square mile).

Often consolidation models less dense, less populated regions do not meet the diversity of California. For example, in the mid-west, there is legislation that approval will be granted to fund two (2) PSAPs per county. This is not a plausible model for California's 58 counties. By county, California ranges in population from Los Angeles County at 10 million people, to Alpine County with just over one thousand people. Alpine County does not have its own PSAP – law is dispatched by a PSAP in the State of Nevada. Los Angeles County alone has 79 PSAPs.
The size of PSAPs vary as well. There is no hard and fast formula that says for X number of population (or call volume) you have X number of telecommunicator workstations. A PSAP is made up of 9-1-1 answering positions and other functional positions such as radio, hot seat (call out desk), supervisory positions, etc. Smaller PSAPs usually combine their radio and 9-1-1 functions in one workstation, while larger PSAPs usually separate the functions into two or more workstations. The 9-1-1 Branch has placed all California PSAPs into one of 4 size classifications:

- Small - 2 to 3 workstations
- Medium - 4 to 7 workstations
- Large - 8 to 12 workstations
- Extra-Large - 13+ workstations

Is there an advantage to a larger or smaller PSAP? Many of these questions are answered in this paper, but in general larger PSAPs may see economies of scale in terms of staffing and equipment/supply acquisition. But larger PSAPs cannot, by their very nature, have as much of a "personal touch" to a local community as a smaller PSAP. Again, there is no one model that works for the entire state.

California PSAPs are also configured into one of five (5) combinations of disciplines:

- Law
- Fire
- Law/Fire
- Fire/EMS
- Law/Fire/EMS

Again, there is no formula or guidelines as to how PSAPs are configured. Most of the time it is centered around how the PSAP is governed – by a city, a county, etc. Many fire PSAPs are consolidated with other fire PSAPs in a region, or are part of a joint center for that municipality. Historically, law PSAPs resist regionalization because of perceived problems in differing local penal codes and operational procedures, while fire PSAPs, because of the Incident Command System (ICS), and automatic/mutual aid, tend to have more commonality in operational procedures that allow an easier transition to a regional PSAP.

Governance of PSAPs also varies across the state. Many PSAPs in California are owned and

operated by the jurisdiction they dispatch for – city police, county sheriff, etc. But there are several models for regionalization:

- Joint Powers Authority – Joint powers are exercised when the public officials of two or more agencies agree to create another legal entity or establish a joint approach to work on a common problem, fund a project, or act as a representative body for a specific activity. Agencies that can exercise joint powers include federal agencies, state departments, counties, cities, special districts, school districts, redevelopment agencies, and even other joint powers organizations. A California agency can even share joint powers with an agency in another state. Examples are: Sacramento Regional Fire/EMS, Santa Cruz ECC, Stanislaus Regional ECC, San Bernardino County Con Fire

- Contract for Services – When one agency takes a leadership role and offers dispatching services to other agencies, usually with contiguous borders. Contract agencies then pay a fee to the lead agency. Usually the PSAP is located within the leading agency's facilities and utilizes the leading agency's human resource department. Contract agencies are usually required to pay for all start-up costs and perhaps amortized equipment costs in addition to a monthly/quarterly/annual fee for service. There may be pre-negotiated agreements regarding withdrawal from the contractor PSAP, including forfeiture of joint assets and date restrictions for withdrawal. Examples are: Monterey County, Alameda County Regional Fire

- Memorandum of Understanding (MOU) – An MOU is a formal agreement between two or more parties. Agencies can use MOUs to establish official partnerships. MOUs are not legally binding but they carry a degree of structure and planning that evaluate mutual needs; garnering respect and support as well as a desire for success. MOUs would be best for Regionalization or virtualization situations where the PSAPs are still separate entities. Examples are: Verdugo Fire

Model: Placer County Regional 9-1-1 System

Type of Consolidation/Regionalization: Virtual	Calls for Service 2015: 559,005
	Total Population: 592,847
Agencies involved: 5	Total Area Served: 1,593.36 square miles
Discipline Configuration: Law/Fire/EMS	Form of Government: Local
PSAP Workstations: 30	Form of Governance: Contract for Service
Authorized PSAP Staffing: 67	How Long in Existence: <1 yr.

Several Placer County PSAPs have initiated a hosted 9-1-1 system between the five participating agencies - Placer County Sheriff, Auburn Police Department, Lincoln Police Department, Rocklin Police Department, Roseville Police/Fire Department. The system is a hosted Viper (West) solution. Roseville PD and Placer County each have a hosted server for geo-diversity and redundancy. Rocklin, Auburn and Lincoln are satellite agencies that connect back to both Roseville and Placer County for diversity.

The system is governed by a sub-committee of the Placer Law Enforcement Agencies (PLEA) which is each of the agency Chiefs & Sheriff. The sub-committee is comprised of the PSAP Managers of the PLEA. The Committee oversee the telephone system and all emerging technology that may be introduced into Dispatch. The Committee meets each quarter and reports back to PLEA on a regular basis. Each agency has contributed its SETNA funds only for installation and maintenance of the system.

The 9-1-1 system is programmed to allow a 9-1-1 call to automatically "rollover" to a pre-defined agency after a set threshold, allowing for all 9-1-1 calls to get answered. The rollover agency will screen the call and based on type of call will either enter call for service or advise the jurisdictional agency. If the jurisdictional agency is not available due to an emergency, the answering agency can start resources to stabilize and wait for jurisdictional agency to respond. This model allows for dispatchers from any agency to go to one of the other PSAPs to answer calls. Rocklin and Lincoln share a CAD system (RIMS). Call flow is established by agency and delivered by agency log in. Effectively enhancing response time for dispatcher to arrive at a PSAP for a large-scale event and start to answer calls for service. Placer and Auburn share a CAD (Tiburon) while Roseville has New World CAD. There is a project in progress that has a CAD-to-CAD link with Lincoln, Roseville, Rocklin, Auburn PD's and Placer County. Once complete this will allow for communication and data sharing with the CAD systems. This process started approximately 2012 and first telephone system cutover was end of July 2016, last agency to cut is Rocklin, scheduled for November 2016.

Model: Marin County Sheriff's Office

Type of Consolidation/Regionalization: Hybrid	Calls for Service 2015: 202,750
	Total Population: 252,000
Agencies involved: 15	Total Area Served: 520 square miles
Discipline Configuration: Law/Fire/EMS	Form of Government: Local
PSAP Workstations: 15	Form of Governance: Contract to Agency
Authorized PSAP Staffing: 43	How Long in Existence: Since 2000

The Marin County Sheriff's Office provides dispatch service for the Sheriff's Office, the 4 southern Marin law agencies (Belvedere, Tiburon, Mill Valley and Sausalito) and Central Marin Police Authority (serving Larkspur, Corte Madera and San Anselmo). The Center provides EMD for all medical calls in the county.

For Fire, the Sheriff's office provides dispatch service for all Fire Agencies in the County (EXCEPT) County Fire. County Fire is a CAL FIRE Contract County and their ECC receives additional funding from CAL FIRE. County Fire does share CAD with the Sheriff's Office and within the next 6 months will share the 9-1-1 phone system. There is a long-term vision that County Fire will eventually be consolidated and/or co-located with the Sheriff's Office.

There are 2 others PSAPs in Marin County that use a different CAD/RMS system that dispatch Law only (San Rafael PD and Fairfax PD).

There are multiple positive reasons for agencies contacting with the Sheriff's Office. These include:
- Single point of coordination for law and fire agencies including call processing times.
- Managed Comm center by experienced Communications Managers versus sworn staff that rotates.
- Cost savings to partner agencies.

There are challenges to adding agencies to an already existing center. Points of consideration include: Will the staff come to the Sheriff's Office? Will entry-level staff be added? How will cross-training experienced and new staff be completed? At what point does additional supervisory/management staff need to be increased? The desire to keep costs low may overshadow the need for additional supervision.

Model: Verdugo Fire Communications Center

Type of Consolidation/Regionalization: Total Population: 845,016
Consolidated by Discipline   Total Area Served: 139.67 square miles
Agencies involved: 14   Form of Government: Local
Discipline Configuration: Fire/EMS   Form of Governance: Department within
PSAP Workstations: 9   City/County
Authorized PSAP Staffing: 18   How Long in Existence: 10 years
Calls for Service 2015: 156,744

The Verdugo Fire Communications Center was established August 1, 1979, when the founding cities of Burbank, Glendale, and Pasadena were faced with several concerns:
- Limited local resources
- Voluntary mutual aid with an average 45-minute delay
- Unfamiliarity with neighboring cities' geography
- Nonstandard fire-fighting tactics
- Incompatible equipment
- A lack of common radio frequencies

The benefits of a regional dispatch center were recognized immediately. The agreement among the three cities included a "no borders" clause – the closest fire engine responded to calls regardless of jurisdiction. There were 23 fire stations in the borderless system, and up to 15 fire engines could be dispatched to a major incident without delay. Specialized equipment was shared among the three cities, including an Air Utility, a Hazardous Materials unit, and an

Urban Search and Rescue unit. In 1996, the cities of South Pasadena and San Marino contracted for fire dispatch services, which added two more fire stations to the system and an increase of approximately 2,500 incidents per year. Eight more fire stations were added in 1999 when the cities of Monrovia, Arcadia, and Sierra Madre joined the Verdugo System, and in 2000 when San Gabriel was added. Ten additional stations were added when Monterey Park, Alhambra and Montebello joined the Verdugo System in February 2005, April 2006, and February 2009 respectively. In September 2011, the Burbank-Glendale-Pasadena Airport Authority (Bob Hope Airport) became the 13th agency to contract for Verdugo's dispatch services, bringing the total to 44 fire stations in the Verdugo System. The name Verdugo was chosen because of the Verdugo mountain range spanning the three owner cities. Glendale was chosen as the Center's site due to its central location. The Center is overseen jointly by the Burbank, Glendale, and Pasadena Fire Chiefs.

Identified Pros/Cons   Since its first year of operation, the Verdugo Fire Communications Center has dispatched over 1,600,000 incidents. The regional dispatch system has been very successful, providing the highest level of service to the communities of its 12 cities and the Burbank-Glendale Pasadena Airport Authority, saving significantly both response time and money. Some of the additional benefits of 13 fire agencies combining resources into a single regional communication center include:

- Area Coordination within a regionalized zone (Area C Coordinator, Region I, Los Angeles County);
- Costs of personnel and computer, phone, dispatch and radio communication systems are shared between multiple agencies, lowering each agency's portion and eliminating unnecessary and costly redundancy;
- Dispatchers who specialize in fire and rescue and can provide Emergency Medical Dispatch (EMD) instructions to callers prior to the arrival of paramedics;
- Coordination of "unified responses" within the automatic aid system, and beyond, is centralized;
- Systematic coverage of Key Fire Stations throughout the system, performed dynamically;
- Fast access to California Office of Emergency Services (CALOES) resources through ROSS (Resource Ordering and Status System), a national system for dispatch of mutual aid resources to another jurisdiction's fire or requests for resources for larger scale incidents within the Verdugo System;
- Common radio frequencies, permits relatively seamless operations on major incidents, increased safety on the fire ground, and faster initial responses, and greater communications interoperability;
- Redundancy of critical radio, telephone, and Computer-Aided Dispatch (CAD) systems to help prevent interruptions in service, and supports Continuity of Operations;

- Fire stations are alerted automatically through CAD, which provides a hard-copy printout at the fire station and displays dispatch information on Mobile Computer Terminals (MCT's) which are found in each primary apparatus responding;
- Status changes and apparatus movements are dynamically recorded using MCT's, reducing radio channel traffic and congestion;
- Notifications to key personnel are automatically triggered by alarm level or incident type through CAD, or manually by the dispatchers;
- Detailed incident history information is recorded through CAD;
- The ReddiNet hospital status system displays local hospital emergency department status for EMS incidents and is available to units in the field over the mobile data system;
- Monthly Task Force meetings are held where Chief Officers share in decision making and keep their colleagues in the other Verdugo System agencies updated and informed;
- In-depth statistical analysis of fire and rescue incidents using data captured by the CAD system

Model: Office of Public Safety Communications, County of San Mateo

- Type of Consolidation/Regionalization: Shared Services
- Agencies involved: 14
- Discipline Configuration: Law/Fire/EMS
- PSAP Workstations: 14
- Authorized PSAP Staffing: 48
- Calls for Service 2015: 500,000
- Total Population: 760,000
- Total Area Served: 744 square miles
- Form of Government: Local
- Form of Governance: Department within City/County
- How Long in Existence: 1977

The Office of Public Safety Communications (PSC) is one of several departments under the oversight of the County Managers Office. The Communications Center Directors directly reports to the Assistant County Manager. PSC employs 62 personnel. Twelve employees are supervisory/ management including the two Directors, three Operations Managers and five Supervising Communications Dispatchers. There are three administrative staff, a Dispatcher Specialist, an Office Specialist and a Senior IT Technician. The remaining employees are line staff assigned to the Communications Center. The Department is divided into three Divisions, Administration, Operations and Systems.

Services provided are distinguished as either "mandated" or "discretionary" services. Mandated may be described as those services which have been sanctioned by the California Government Code, County Ordinance, County Resolution or contract. Core "mandated" services Include:

- Primary and Secondary Public Safety Answering Point (PSAP) providing 9-1-1 callers access public safety resources. This program also provides to access to translation services and hearing impaired translation if needed.
- Administration of Medical Priority Dispatch protocols including basic training, in-service training and quality assurance.
- Compliance of requirements and the provision of accepting wireless 9-1-1 calls
- Provision of full-time communications and dispatch services to:
  - o San Mateo County Pre-Hospital Care Emergency Medical Group – including all 14 Fire Service Departments/Districts
  - o Ambulance Contractor (AMR) and the South San Francisco Rescue Ambulances
- Intergovernmental Contracts with cities and entities for the provision of Law Enforcement communications including:
  - City of East Palo Alto
  - City of Half Moon Bay
  - Town of Broadmoor
  - City of Millbrae
  - City of Daly City
  - SamTrans/Transit Police
- Provision of part-time and/or "on-call" communications and dispatch services to:
  - San Mateo County Departments or Contractors including but not limited to:
    - o Probation
    - o Coroner
    - o Public Works
    - o Information Services
    - o Area Office of Emergency Services
    - o District Attorney
    - o Superior Court
    - o Peninsula Humane Society
    - o Environmental Health
    - o Parks
    - o Building Inspector
- Provision of countywide mutual aid communications coordination Law Enforcement and Fire
- Provision of emergency direct emergency alarm monitoring for private homes and businesses for a fee
- Custodian of Records and County Master Street and Addresses for State 9-1-1
- Compliance with State laws for the provision of pre-employment testing, selection processes, basic law enforcement training and continued education
- Provision of providing fire line internal support of essential 9-1-1 equipment and systems

Discretionary Services include but are not limited to:
- County Message Switch Maintenance and programming
- Mobile Communications and Field Support for County SWAT Team
- Public Education and Relations Events
- Special Detail Dispatching i.e., Countywide Gang Task Force, Avoid the 23, Transit Night Games
- Support of the Public Safety Paging System
- On-site programming for CAD and Public Safety Systems
- Alternate 9-1-1 PSAP for Allied Agencies
- Emergency Back-up for police dispatch centers in the County
- Customer CAD enhancements for customer agencies

The PSC Command Staff directly reports to the Communications Center Operations Director. Two Operations Managers head up the Operations Division, which is comprised of all Communications Center operations and its staff. Each Manager is assigned a functional area of expertise, Police, Fire/Emergency Medical Services operations and communications.

There are two Communications Center Directors. The Operations Director oversees the Department and has two Assistant Directors, one in Operations and one in Administration. There is a Management Analyst, who assists in the development and maintenance of the Department's 10-million-dollar budget. The Operations Director is also directly responsible for the development and processing of contracts with external customer agencies, liaisons with partner agency Police and Fire Chiefs and Department Heads.

The Capital Projects Director is assigned to long-term coordination and management of two high profile initiatives in the Department/County:
1) Design and Construction of a Regional Operations Center (ROC). This multi-use facility will house Sheriff's OES and Homeland Security, an Emergency Operations Center, Training/Meeting Rooms, a state-of-the-art 9-1-1 Center and countywide Data Center. This mission critical facility is a $40 Million-dollar project slated for occupancy in May 2018.
2) San Mateo County Regional Operations Center Technology Initiatives Project which will replace the existing public safety technology for all PSC and its stakeholders. Estimated at $10 million project, the county will replace the Computer-Aided-Dispatch System, Mobile Client Technology, Mapping, Business Analytics and associated public safety technology.

A Personnel Services Manager is directly responsible for the coordination of the master and shift schedule of 50 line personnel and their four supervising dispatchers.

A Lead Dispatcher serves as the Department's Quality Assurance Supervisor who oversees auditing processes of Emergency Medical Protocols.. Communications Dispatchers must remain compliant in administering these protocols at a 95% or greater level to continue their certification. Twenty-five calls a week are audited in both disciplines to the Department to remain an Accredited Center of Excellence.

The Office Specialist conducts a variety of duties including reception, the department's purchasing of non-fixed asset items and initial accounts payable/receiving processing. The position represents the Department in the County's Countywide Safety Committee and oversees facilities maintenance and emergency preparedness. The Office Specialist carries out duties of the Custodian of Records, averaging 25 tape reproductions a week for the District Attorney's Office, Investigators, Fire personnel, private attorneys and the public.

The Operations Division is the heart and soul of the organization. The Communications Center is a primary public safety answering point (PSAP) for six law enforcement agencies:
- San Mateo County Sheriff's Office and its contract agencies
- Broadmoor Police District
- East Palo Alto Police Department
- Daly City Police Department
- Transit Police

It is also the secondary PSAP for all Fire and EMS calls for service, all of which are transferred to the Center from municipal police dispatch centers or from the Police Dispatchers at PSC. Fourteen fire agencies are served by the Department.

The County's EMS Agency administers the master contract with a private company providing ambulance transportation of emergency pre-hospital care patients. American Medical Response (AMR) provides this service to the County, with the caveat that dispatch is provided by PSC. PSC Fire/EMS Calltakers and Dispatchers provide Emergency Medical Dispatch (EMD) and were accredited as 97th in world and 9th in the State of California as an International "Center of Excellence" (ACE) from the National Academy of Emergency Dispatch.

Systems

The Systems Division is the engine that allows dispatchers to do their jobs efficiently.

PSC recently upgraded hardware operating on a Northrop Grumman (NG) Computer Aided Dispatch (CAD) System (formerly PRC). This system is used to enter calls for service, provide deployment recommendations, and tracking of units. This upgrade maintains a system availability rate of 99.9% per year. The CAD system interfaces with other Public Safety technology used by PSC customers to include the following:
- Mobile Data Systems using the NG Mobile Client Software

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- CAD incident/case transfer to multiple record management systems including Tiburon, RIMS, Sunpro, and Fire House.
- CAD interfaced Zetron station alerting systems
- Alpha-numeric paging—programmed and maintained by PSC with over 1200 customers
- Automatic reception of alarms from the Radionics alarm receiver to include residential and commercial alarm systems
- Community-based data management for each customer, to include:
- Patrol Beat definitions for reporting purposes
- Premise history
- Common place names (i.e. Joe's Market)
- Briefing notes to ensure important information is passed along from shift to shift in an automated format
- Graphical mapping
- 120 telephone line, touch screen Positron Viper telephony system
- GIS mapping for location identification of 9-1-1 callers
- Touch-Screen Motorola Radio Controllers and Trunked Radio System

Other equipment used in the Center includes the Countywide Electronic Tracking System (used in Bank Robbery Apprehension), a regional Hospital Availability System (EMSystems) and many others.

The Systems Division is also responsible for maintaining the software of the County's law enforcement Message Switch (MSS). Under the general direction of the Sheriff, customized programs are developed to assist in the processing of over 2,000,000 messages a year, countywide.

The Systems Dispatch Specialist is primarily responsible for information management of CAD data and the system's Geographical file of the County and other affiliated systems. The IT Technician is responsible for the maintenance of the department's personal computers and software applications.

Performance Standards

The Center's performance is closely monitored and reports performance measures to the County Board of Supervisors quarterly. Standards include processing of high priority calls for service within established timeframes and customer satisfaction. The Center continually meets the call processing standards and rates over 99% in customer satisfaction. In addition to these standards, PSC dispatch staff have job-related performance standards which are used during the performance evaluation process as well as compliance standards (95% or above) for Emergency Medical Dispatch services.). PSC continually exceeds the National Academy standards and Center of Excellence averages for EMD compliance (98%).

Unique and value-added features
- PSC is the only Communications Center in the County that can manage a multi-discipline incidents (police, fire and medical) for five agencies (Broadmoor, Sheriff's jurisdiction, Half Moon Bay, Millbrae and East Palo Alto), resulting in overall efficiency, accuracy and expedited service to all.
- Field Communications Teams respond to greater alarm fires and SWAT call-outs
- Staff can cross-train on all radios (police, fire, medical) or remain "specialists" in either Law or Fire/EMS dispatching
- A Fire/EMS Back-up Dispatch Center has been established in the event where the Hall of Justice Communications Center requires evacuation or experiences failure

New Funding Models and Policies Needed
Systiem Diagram
Demarcation (demarc) between the 9-1-1 network and the PSAP-owned equipment will need to be defined. What is the demarc between the 9-1-1 Network, the hosted solution, and PSAP CPE? What is charged to the PSAP funding allotment and what is the PSAP's responsibility? A new funding model is needed.

Hosted Solutions
Is there a savings in a hosted solution? What is the break-even point from separate installations versus the hosted solution? With the current funding model, there are no savings – any reductions in servers result in additional incremental funds for the PSAP to spend.

Progressive Enforcement of Call Answering Standards
Call answering standards are a part of the Operations Manual. Currently this standard is 95% of 9-1-1 calls must be answered in 15 seconds or less. (based on the National Fire Protection Association Technical Standard 1221). Historically compliance to this standard has been monitored by the 9-1-1 Branch, but no efforts have been made to enforce the standard. A standard progression of enforcement is needed:
1. Notification of PSAP of non-compliance.
2. 9-1-1 Branch Conduct Counseling – Tips & Tricks to improve compliance
   a. Increase staffing
   b. Fill vacant positions
   c. Change workflows
   d. Regionalization
3. Escalation of the issue to the Agency Management Staff
4. Escalation of the issue to Elected Representatives (Mayor, City Council, Board of Directors, Board of Supervisors, etc.)
5. Notice of Non-Compliance Public Notice on the State's 9-1-1 website.

Workgroup Suggestions